

STATE BOARD OF HEALTH

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: February 17, 1986

THRU: Reggie Baker ROB

TO: Monon Well Field
CERCLA File

FROM: John P. Buck *JB*
Site Management Section

SUBJECT: Investigation of Monon's
Municipal Well Field Contamination

EPA Region 5 Records Ctr.



322776

Monon is a small municipality located in the north central portion of White County (Monon quadrangle R4W, T28N, Section 21, Monticello quadrangle R4W, T28N, Section 22). On May 22, 1984, the U.S. Environmental Protection Agency (EPA), as part of a routine sampling program for municipal well systems, discovered that the city's wells were supplying finished water containing 6.2 parts per billion (ppb) trichloroethylene (TCE) and 73 ppb tetrachloroethylene (PCE). Sampling conducted on November 8, 1985, by the EPA continued to show elevated levels (31 ppb TCE, 330 ppb PCE). Four days later, the TCE level was 36 ppb and the PCE level was 170 ppb. These figures represent the levels of contamination found in the water prior to any form of treatment. The finish water going into the water mains contained 19 ppb TCE and 170 ppb PCE. The EPA's action level for emergency action is 170 ppb for PCE.

The EPA's on-scene coordinator (OSC) assigned to this project is Ms. Verneta Simon. She coordinated the installation of a temporary carbon filtration system designed to bring the TCE and PCE levels down to acceptable concentrations. The system was installed on December 3, 1985. Subsequent to the installation of the treatment system, the Indiana Public Water Supply Division has monitored the PCE and TCE levels both before and after the filtering unit. The pre-treatment TCE concentrations ranged from 1 ppb to 10 ppb. The pre-treatment PCE concentration ranged from 45 ppb to 100 ppb. The highest post-treatment concentration for PCE was 2.1 ppb, with the majority of the readings being less than 0.7 ppb. The post-treatment TCE concentrations were generally 1 ppb or less.

In response to the above-mentioned threat to Monon's Municipal Well Supply, Mr. John Buck initiated a meeting with federal, State, and local officials to devise a long-term solution to the well field contamination. In attendance were Messrs. John Buck, Richard Molini, and Russell Patterson of the Indiana Division of Land Pollution Control (DLPC), Messrs. Arnold Viere and Ernie Burcham of the Indiana Public Water Supply Division, Ms. Verneta Simon, of the EPA, Mr. Packmayer of the White County Health Department, Mr. Christopher Larson of the Kankakee and Iroquois Regional Planning Commission, Mr. Gary Quade of the Monon Water Superintendent, Mr. Richard Sewart, President of the Monon Town Board, and Ms. Iowa Ward, Monon's Secretary and Treasurer.

The initial discussion centered around the various options available for remedial actions at the well field. Mr. Packmayer mentioned that an abandoned stone quarry south of Monon was filled with water and could possibly be a source of supply. Due to the problems associated with treating surface water and the cost of connecting to the distribution network, this course of action was eliminated. Four other options outlined by the EPA's Technical Assistance Team (TAT) were: (1) continued carbon filtration, (2) installation of an air stripper, (3) purchasing bottled water for drinking, and (4) construction of a new well field. It was decided that the best long-term solution to this problem would involve the construction of a new well field. Although the initial expenditure of this alternative would be expensive, the annual operating cost would not vary greatly from the cost of maintaining the present system. A conservative estimate for relocating the well field is \$370,000 (TAT estimate).

At this juncture, the discussion turned toward the possible sources of funding for the well relocation. Ms. Simon indicated that it was doubtful that the EPA could provide any funding due to the question of CERCLA reauthorization. Mr. Buck also mentioned that monies would not be available from the Indiana Environmental Management fund for this task. Mr. Larson stated that grants were available, such as the community development block grant, which could fund both the engineering study for the project and the actual cost of installation. To pursue that avenue of funding, however, Mr. Larson would need a more detailed engineering proposal than the one provided in the TAT report. Ms. Simon stated that she would find out whether it would be feasible for TAT to further expand upon their initial proposal.

Once it was decided to pursue the new well field alternative, it became evident that an investigation would have to be undertaken to ensure that the new well field would not also be contaminated. Mr. Buck indicated that the State has already started the search for the source of contamination. Towards that goal, the State is committed to conducting a sampling survey of residential wells in the vicinity of the well field to determine if there is any surficial contaminants present. Further, the State is going to collect some soil samples to determine the source of contamination. During the well sampling, an effort will be made to measure the depth to the water in each well. With this information, a localized groundwater flow direction might be established. Finally, it was brought to the attention of the parties involved that a landfill was located approximately one mile north of the town. Evidently, a well had been installed to monitor contaminants leaching from this landfill. As part of the study, an attempt will be made to sample this well.

JPB/kp